그는 그	
그는 그	
그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그	
그 그는 그는 그는 그는 그는 그는 이번에 하지 않는 생각이 없었다면 이 생각이 하면 모든데	
그는 그 그 그 그 그 그는 그리 남자 보인 경험 경험 학생들이 가는 그리를 하지 않고 보다 하다.	
	3.
	1.25







NATIONAL LIBRARY of MEDICINE

BIOMEDICAL EFFECTS of VOLCANOES

Specialized Bibliography Series

July 1980

NATIONAL LIBRARY DEC 30 1980 OF MEDICINE

National Library of Medicine Reference Services Division ZW 1 5741 1980-1

MATIONAL LIBRARY OF MEDICINE 3500 ROSKVILLE PIKE BETHESDA, MARYLAND 2001

SBS No. 1980-1

REFERENCE SERVICES DIVISION

SPECIALIZED BIBLIOGRAPHY SERIES

BIOMEDICAL EFFECTS OF VOLCANOES

JULY 1980

138 SELECTED CITATIONS

Prepared by Charlotte Moulton, Ione Auston, Charlotte Kenton Specialized Services Unit, Reference Section

Covers periodical articles, monographs, reports, and miscellaneous material on health effects, air pollution, soil pollution, water pollution and general volcano information. Sources include a broad spectrum of manual and computerized databases, especially TOXLINE, MEDLINE, APTIC, BIOSIS, SCISEARCH, INDEX CATALOGUE of the LIBRARY of the SURGEON-GENERAL'S OFFICE, APPLIED SCIENCE and TECHNOLOGY INDEX, etc. The period covered is primarily the last decade, although selected pieces are included dating back to 1834.



BIOMEDICAL EFFECTS OF VOLCANOES

The recent eruption of Mt. St. Helens in Washington State has brought forcibly to the attention of the health sciences community the potential adverse effects of volcanic action on man's health and his environment. In the interest of providing a wide scope of coverage for this subject, including health effects and air, soil, and water pollution, a number of publications were included which are not in the collections of the National Library of Medicine. In the desire to make the bibliography available in as timely a manner as possible, the bibliographic contents of the majority of the citations were not verified. It is hoped, however, that the health sciences community will find it a useful guide to published data on the subject.

SPECIALIZED BIBLIOGRAPHY SERIES

This is one of a series of Specialized Bibliographies prepared and distributed by the Reference Section, Reference Services Division, National Library of Medicine. These bibliographies are more comprehensive in scope and coverage than NLM's Literature Searches which are produced from the Library's data base, MEDLARS. Specialized Bibliographies or guides generally are comprehensive in scope and, although they may include citations found in MEDLARS, they are not restricted to them. They may occasionally be manual compilations but are more usually the result of a combination of manual and computerized searching, including non-MEDLARS data bases. The only criterion for including a published work in a Specialized Bibliography is its relevance to biomedicine; the means of locating it, the format of the publication, and the ownership of the item by the National Library of Medicine are irrelevant.



HEALTH EFFECTS

- An American report upon the West Indian eruptions. Nature (London), 1903 15 Jan;67(1733):256-59
- Assar M. Guide to sanitation in natural disaster. Geneva, World Health Organization, 1971. 135 p.
- Avanzi (Intorno agli) unmani scoperti sul Vesuvio presso l'Osservatio. Riv mens psichiat forense Napoli, 1902,v:394-96
- Bardswell N. Volcanic action as a cause of outbreaks of epidemic disease. Edinb M J, 1901:321-35
- Baris YI, Ozesmi M, Kerse I, Ozen E, Sahin AA, Kolacan B, Ogankulu M. [An outbreak of pleural mesothelioma in the village of Karain, Urgup-Anatolia.] Kanser 1975;5(2):63-76
- Belshaw C. Social consequences of the Mount Lamington eruption. Oceania 1951;21:241
- Berner P. À propos de l'éruption du Vésuve; l'hypothèse du feu central et le médecin Estienne de Clave. Chron méd., Par., 1906;xiii:301
- Brecht N Du V. Medical relief during a volcanic eruption. Mil Surgeon, 1913; xxxii:149-52
- Colton H. Sunset crater: The effects of a volcanic eruption on an ancient Pueblo people. Geog Rev 1932;32:582
- Da Corogna L. De l'influence des émanations volcaniques sur les êtres organisés, particulièrment étudiée à Santorin pendant l'éruption de 1866. Paris, 1867. Also (Abstr.) in: Mém Bull Soc méd-chir hôp Bordeaux 1867; ii:104-13
- Efendieva FM. [The efficacy of Klych-Arzan volcanic mud in the treatment of patients with lumbosacral radiculitis.] Vopr Kurortol Fizioter Lech Fiz Kult 1968 Jul-Aug;33(4):352-5
- Il'Nitski'i AP, Belitskii GA. [The carcinogenic polycyclic aromatic
 hydrocarbon benz(a)pyrene in volcanic eruptions.] Dokl Akad Nauk SSSR
 1975 1 Nov; 225(1): 214-16 (Rus)
- Il'nitskii AP, Belitskii GA, Shabad LM. Carcinogenic polycyclic aromatic hydro carbon benz(a)pyrene in volcanic eruptions. Dokl Biochem 1975;225(1-6):470-71
- Ilnitsky AP, Mischenko VS, Shabad LM. New data on volcanoes as natural sources of carcinogenic substances. Cancer Lett 1977;3(5-6):227-30
- Ilnitsky AP, Belitsky GA, Shabad LM. On the carcinogenic polycyclic aromatic hydrocarbon benzo(a)pyrene in volcano exhausts. Cancer Lett 1976 May;1(5):291-4

- Il'nitski'i AP, Gvil'dis VI, Mishchenko VS, Shabad LM
 [Role of volcanoes in forming a natural level of carcinogens.] Dokl Akad
 Nauk SSSR 1977 May 21;234(3):717-19 (Rus)
- Il'nitskii AP, Gvil'dis VY, Mishchenko VS, Shabad LM. Role of volcanoes in the formation of the natural level of carcinogens. Dokl Biochem 1977;234(1-6):173-75. (Eng Transl Dokl Akad Nauk SSSR Ser Biokhim)
- Il'nitskii AP, Belitskii GA, Shabad LM. [Volcanoes and carcinogens.]
 Priroda (Moscow) 1976;9:124-26 (Rus)
- Johnston-Lavis HJ. On the effects of volcanic action in the production of epidemic diseases in the animal and in the vegetable creation, and in the production of hurricanes and abnormal atmospherical vicissitudes. London, Bale and Danilsson, 1914. 67 p.
- Kawarai M, Inoue T, Ishida Y, Kimura H. [An autopsy case of volcanic hydrogen sulfide intoxication.] Kitakanto Med J (Japan) 1978;28(3):237-44
- Keesing FM. The Papuan Orokaive vs Mount Lamington: cultural shock and its aftermath. Human Organisation 1952;2:16
- Labat A. Le volcanisme, sovenirs des lecons de mes maitres, Daubrée, Hebert, S. Meunier. Paris, 1907
- Markovic B., Endemic nephropathy and cancer of the upper urinary tract urothelium in Yugoslavia. Isr J Med Sci 1972;8(4):540-48
- Price, E W. The association of endemic elephantiasis of the lower legs in East Africa with soil derived from volcanic rocks. Trans R Soc Trop Med Hyg 1976;70(4):288-95
- Price EW. Endemic elephantiasis of the lower legs in Rwanda and Burundi. Trop Geogr Med 1976 Dec;28(4):283-90
- Rossina MS. [Treatment of patients with vibration disease with North Osetian volcanic mud "tereklit"] Vopr Kurortol Fizioter Lech Fiz Kult 1976 Nov-Dec;(6):79-80 (Rus)
- Tonkinson R. Maat Village, Efate: a relocated community in the New Hebrides. Eugene, University of Oregon Anthropology Dept., 1968
- Tousignant M. Espanto: a dialogue with the gods. Cult Med Psychiatry 1979 Dec;3(4):347-61
- Verrill AE. Causes of the sudden destruction of life in the Martinique volcanic eruption. Science 1902 23 May;15(386):824

AIR POLLUTION

- Abramovskii BP, Alimov VN, Ionov VA, Nazarov IM, Patrakeev SI, Fedotov SA, Chirkov VP. [Outburst (into atmosphere) of gaseous and aerosol eruption products of volcano Tolbachik (Kamchatka)] Dokl Akad Nauk SSSR 1977,237(6):1479-82
- Andelman DA. 20 percent rise feared in carbon dioxide. New York Times 1972 May 17:6
- Angreji PD. Effect of air-pollutants on ozone concentration in the stratosphere. J. Maharaja Sayajirao Univ. Baroda, 1975;22-23(3):173-83
- Arctowski H. A study of the influence of volcanic dust veils on climatic variations. Science 1915 12 Feb;16(1050):252-55
- Azzaria LM, Habashi F. Mercury pollution-examination of some basic issues. CIM Bull 1976;69(772):101-07
- Bartels OG. An estimate of volcanic contributions to the atmosphere and volcanic gases and sublimates as the source of the radioisotopes 10 Be, 35 S, 32 P and 22 Na. Health Phys 1972 Apr;22(4):387-92
- Bigg EK. Stratospheric pollution and volcanic eruptions. Weather 1971 Jan;26(1):13-18
- Cadle RD, Wartburg AF, Pollock WH, Gandrud BW, Shedlovsky JP.

 Trace constituents emitted to the atmosphere by Hawaiian volcanoes.

 Chemosphere, 1973;2(6):231-34
- Cawse PA. Anomalous high concentrations of particulate bromine in the atmosphere of the United Kingdom. Chemosphere 1975;4(2):107-12
- Coderre JA, Steinthorsson S. Natural concentrations of mercury in Iceland. Geochim Cosmochim Acta 1977;41(3):419-24
- Crafford TC. Sulfur dioxide emission of the 1974 eruption of Volcan Fuego, Guatemala. Bull Volcanol 1975;39:536-56
- Dailey NS, Winslow SG. Health and environmental effects of acid rain. An abstracted literature collection, 1966-1979. Oak Ridge, Tenn., Oak Ridge National Laboratory, Mar 1980.
- Davison SP. Environmental mercury. Environ Health 1978 Jul;86(7):155-56
- Dittberner GJ. Climate change: volcanoes, man made pollution, and carbon dioxide. IEEE Trans Geosci Electron 1978;GE16/1:50-61
- Djokolelono M, Suhartono, Suratman, Rachmat M. [Airborne radioactivity in room and in the environment.] Report; PPGM-L137-77, 1977. 35 p.
- Fowler, B. A. International conference on environmental arsenic: an overview. Environ Health Perspect 1977;19:239-42

- Graeber EJ, Modreski PJ, Gerlach TM. Compositions of gases collected during the 1977 east rift eruption, Kilauea, Hawaii. J Volcanol Geotherm Res 1979;3-4:337-44
- Guzman Lopez GT. Basic status of ambient contamination at Cerro Verde-El Salvador, preliminary results. WMO Air Pollut Meas Tech 1977; Part II, 460:70-7
- Haulet R, Zettwoog P, Sabroux JC. Sulfur dioxide discharge from Mount Etna. Nature (London) 1977;268:715-17
- Jepsen AF, Langen L. The dynamic measurement of ambient airborne gases near geothermal areas. Proc Workshop Sampling Geotherm Effluents 1978, 2nd, PB-290 034:3-13
- Johnston DA. Volcanic contribution of chlorine to the stratosphere: more significant to ozone than previously estimated? Science 1980 25 Jul;209:491-93
- Koide K, Yuji I, Keiji S, Kazunori V, Masahiro K, and Osamu I. [SO2 concentration around Mt. Aso and volcanic ash fall.]

 Kumamotoken Cisei Kogai Kenkyusho Ho. (Annu Rep Kumamoto Prefect Inst)
 1975;1974:38-42
- Komaki T. [Air pollution of Kagoshima City. II.] Kagoshima Daigaku Kogakubu Kendyu Hokoku 1975;17:67-73
- Lakin HW. Selenium in our environment. Advances in Chemistry Series, No. 123. Trace elements in the environment. Symposium. Washington, D.C., Sept 15, 1971. 1973:96-111
- Lepel EA, Stefanssom KM, Zoller WH. The enrichment of volatile elements in the atmosphere by volcanic activity: Augustine volcano 1976. J Geophys Res 1978;83(C12):6213-20
- Mroz CJ, Zoller W. Composition of atmospheric particulate matter from the eruption of Heimaey, Iceland. Science 1975;19:4213
- Nakazawa T, Kurita H, Hirosawa I, Sato T, Satsumabayashi M, Komeyama S, Uchida H, Sasaki K. Air pollutant concentrations in cities, volcanoes, and forests. Nagano Prefectural Sanitation and Pollution Res Inst Res Report, No. 142 1977. 58 p.
- Reid C Jr, Henderson D, Rumfelt T. The effect of Mount Saint Augustine's eruption on Anchorage air quality. Cook Inlet Air Resources Management District, Anchorage, Alaska, 1976. 7 p.
- Rose WI, Cadle RD, Heidt LE, Huebert BJ, Lazrus A, Friedman I. Gas and H isotopic analyses of volcanic eruption clouds in Guatemala. Trans Amer Geophys Union 1978;59(12):1222
- Siegel SM, Siegel BZ. Antarctic volcanism and world mercury. Toxicology Res Proj Dir 1979;04(6)
- Siegel BZ, Siegel SM. Mercury emission in Hawaii: aerometric study of the Kalalua eruption of 1977. Environ Sci Tech, 1978;12(9):1036-39

- Siegel SM, Siegel BZ. Mercury fallout in Hawaii. Water, Air, Soil Pollut 1978; (9)1:113-18
- Smith FA, Hodge HC. Airborne fluorides and man: Part I. CRC Critical Reviews in Environ Control 1978,8(4):293-371
- Stoiber RE and others. Mount St. Helens, Washington, 1980 volcanic eruption: magmatic gas component during the first 16 days. Science 1980 13 Jun; 208(4449):1258-59
- Suess MJ. The environmental load and cycle of polycyclic aromatic hydrocarbons. Sci Total Environ 1976;6(3):239-50
- Suzuki T. [The fallout of mercury and vanadium in polluted areas.] PPM 1979,10(2):2-11
- Tadokoro S, Ogawa H, Higuchi Y, Nakazima K, Takahashi I, Saito, Y.

 [Acute toxicological studies on volcanic gas.] Jap J Pharm 1973;23
 (Suppl):128
- Taylor BL, Galchen T, Schneider SH. Volcanic eruptions and longterm temperature records - empirical search for cause and effect. Q J Royal Meteorological Society 1980;106(447):175-99
- Wexler H. Volcanoes and world climate. Sci Am 1952;186(4):74-80
- Zoller WH, Lepel CA, Mroz CJ, Stefanssen KM. Trace elements from volcanoes: Augustine, 1976. World Meterorological Organization Report 1977,460(10):155-64

SOIL POLLUTION

- Betz F Jr. Environmental geology. Benchmark Papers in Geology, 1975; 25:390
- Caretta G, Del Frate G, Piontelli E, Todaro F. [Distribution of keratinophilic fungi in the soil of the Etna volcano, Sicily, Italy.]
 Riv Parassitol [1978] 38(1):115-28
- Chrysler KM. A lasting pall over the Northwest. U.S. News and World Report 1980 Jun;88(24):29-30
- Denton H. Moses Lake, volcano's cloud of ash darkens a city's future. Washington Post, 1980 23 Jun:Al,A2,A3
- Diller JS, Steiger G. Chemical analysis of dust from the Coya. Science 1902 13 Jun;15(389):947-50
- Diller JS. Volcanic sand which fell at Unalaska, Alaska, Oct. 20, 1883 and some considerations concerning its composition. Science 1884 30 May;3(69):651-54

- Eggler WA. Influence of volcanic eruptions on xylem growth patterns. Ecology Summer 1967;48(4):644-47
- Emison EB, Porter JW, Norris KC, Apps GJ. Ecological distribution of the vertebrate animals of the volcanic plains Otway Range area of Victoria, Australia. Fish Wildl Pap Victoria 1977;(1):93
- Fridriksson S. Biological research on the volcanic island Surtsey and its environs. Surtsey Research Society, P.O. Box 1238, Reykjavik. Project number: 6401.
- Fry WH. Mineral content of volcanic ashes from Kodia. Science 1912 15 Nov; 36(933):681-82
- Fukunaga CT. Volcanic air pollution: deleterious effects on tomatoes. Water, Air and Soil Pollution 1978 Jan;9(1):113-18
- Garrec JP, Lounowski A, Plebin R. The influence of volcanic fluoride emissions on the surrounding vegetation. Fluoride 1977;10(4):152-56
- Georgsson G, Petursson G. Fluorosis of sheep caused by the Hekla eruption in 1970. Fluoride 1972 April;5(2):58-66
- Hamilton LN, Price TV. Sulphate reducing bacteria in volcanic environments at Rabaul and Bougainville. Sci New Guinea 1975 Dec;3(3): 156-64
- Haigh WD. The carboniferous volcanoes of Phillipstown in King's County. Dublin, 1914.
- Hoffman GM, Malkomes HP. Bromide residues in vegetable crops after soil fumigation with methyl bromide. Agric Environ 1974,1(3):321-28
- Hurst AW, Christof DA. Surveillance of White Island volcano. Thermomagnetic effects. NZ J Geol Geophys 1973;4: 965-72
- Kratky BA, Fukunaga ET, Hylin JW, Nakano R.T. Volcanic air pollution: deleterious effects on tomatoes. J Environ Qual 1974;3(2): 138-40
- Mehringer PJ, Blinman E, Petersen KL. Pollen influx and volcanic ash: the pollen content of Mazama Oregon and Glacier Peak Washington USA. Ashes reveals details of their dispositional chronologies. Science 1977 21 Oct;198(4314):257-61
- Mun TH, Kuziakina TI. [Organic compounds in the microflora of volcanic ashes.] Dokl Akad Nauk SSSR 1976 Nov-Dec;231(1):232-35(Rus)
- O'Keefe JA. Volcanic ash: terrestrial versus extraterrestrial. Science 1976 8 Oct;194(4260):190

- Quade Horst. Genetic problems and environmental features of volcano sedimentary iron ore deposits of the Lahn Dill type. Handb Strata Bound Stratiform Ore Deposits 1976;7(94):255
- Sauer A. Die Krakatoa-Aschen des Jahres 1883. Chem Centr -B1, Leipz, 1884, 3. F.,(xv):129-35
- Schwartz W, Schwartz A. [Geomicrobiological studies. X. Colonization of the volcanic island Surtsey by microorganisms.] Z Allg Mikrobiol 1972; 12(4):287-300
- Shabad LM. [Some results of analyses on hygenic prophylaxis of chemical carcinogenesis.] Gig Sanit 1977;11:46-50
- Shupe JL and others. Relative effects of feeding hay atmospherically contaminated by fluoride residue, normal plus calcium fluoride and normal hay plus sodium fluoride to dairy heifers. Am J Vet Res 1962;23:777-87
- Siegel SM, Siegel BZ, Eshleman AM, Bachmann K. Geothermal sources and distribution of mercury in Hawaii. Environ Biol Med 1973; 2(2):81-90
- Stehle H. [Preliminary observations on the reconstitution of the vegetal cover upon the Soufriere volcano in Guadeloupe after the eruptions of July-August of 1976, and March 1977.] Bull Soc Botanique France-Lettres Botaniques 1979;126(3):349-59 (French)
- Stommel H, Stommel E. The year (1816) without a summer (volcanic eruption, effect on agriculture). Sci Am 1979 Jun;240(6):176-86
- Ten Khak Mun, Kondrat'eva LM. [Role of adsorption in microbial colonization of volcanic deposits.] Mikrobiologiia 1979 May-Jun;48(3): 523-27
- United Nations. Disaster prevention and mitigation a compendium of current knowledge. NY, United Nations, 1977. 68 p. V. 1, Volcanological aspects.
- Volcanic ash closes Rocky Mountain Laboratory. NIH Record 1980 10 June;32(12):
- Volcanic rain and mud; cinders, ashes and dust. In: Encyclopaedia Britannica. 11th ed. Cambridge, England, University Press, 1910-1911. Volcano, 28: 178-92
- Volcano erupts, spewing clouds and ash. Washington Post 1980 13 Jun, A-5
- Volke HV. [Influence of environmental factors on the yield and response of wheat in volcanic soils.] Agric Tec 1975 Jan/Mar;35(1):4-15
- Voroshilov VP, Sidel'Nikov AN. [Distributional characteristics of vegetation in the region of the solphataric field of Mendeleev volcano USSR.] Ekologiya 1979: 30-35

- Waldrop M. Mount St. Helens: researchers sort data. Chem Engin News 1980 9 Jun;58(23):19-20
- Walsh PR, Duce RA, Fasching JL. Considerations of the enrichment, sources, and flux of arsenic in the troposphere. J Geophys Res 1979; 84(C4):1719-26
- Wille A, Fuentes G. [Effects of the ashes of the Irazu volcano (Costa Rica) on various insects.] Rev Biol Trop 75 Dec;23(2):165-75 (Spa)
- Wood CA. Hazards of volcanic tuff. Letter. Am Scientist 1980;68(1):6
- Zavarzin GA, Vasil'eva LV, Trykova VV. [On the role of microorganisms in post-volcanic processes.] Izv Akad Nauk SSSR (Biol) 1967 Jul-Aug;4:605-11

WATER POLLUTION

- Astolfi E. [Study of arsenic in drinking water. Endemic regional chronic hydroarsenicism.] Prensa Med Argent 1971;58(26):1342-43 (Spa)
- Bortleson GC, Wilson RT, Foxworthy BL. Water quality effects on Baker Lake of recent volcanic activity at Mount Baker, Washington. Prof Pap US Geol Surv 1977;1022 B, 29 p.
- Boussingault Sur les eaux acides qui prennent naissance dans les volcans des Cordillères. Arch gén hydrol, Par, 1891;ii(265):295
- Ciusa W, Giaccio M, Di Donato F. [Trace element content in fish from the Eolian and Tremiti Islands.] Quad Merceol 1974;13(2):105-14
- Davy J. Some remarks in reply to Dr. Daubeny's note on the air disengaged from the sea over the site of the recent volcano in the Mediterranean. London, 1834
- Khramova GG. [Effect of the activity of the Ebeko volcano on the behavior of boron, fluorine, arsenic, phosphorus, and silicic acid in the Goryachee Lake waters.] Byull Vulkanol Stn Akad Nauk SSSR 1976;52:56
- Kido T. [On the living environment for fish in the coastal waters surrounding the new and old volcanic island "Misi-No-Sima".] J Tokyo Univ Fish 1975;61(1-2):59-63
- Kimura T, Yoshimizu M, Sannohe H. [Bacteriological study on lake as ambient water for fish: I. Effects of the volcanic ashes after the eruption of Mt. Usu on Lake Toya, 1977.] Bull Fac Fish Hokkaido Univ 1978; 29(4):363-377
- Lefort J. Analyse de l'eau du volcan de Popocatépetl au Méxique, et observations sur les eaux acides des volcans actifs. J Pharm Chim, Par, 1863;3 s(xliii):433-41

- Mathisen OA. The fertilizing effect of volcanic ash fall on a lake system. Tox Res Proj Dir 1979;04(05)
- Mathisen OA, Poe PH. Effect of volcanic ash deposits on Sockeye salmon lakes. In: Sladecek, V. (ED). Internationale Vereinigung fuer Theoreitische und Angewandte Limnologie Verhandlungen. Copenhagen 1977, Aug 8;Part 2:165-72
- Olafsson J. Volcanic influence on sea water at Heimaey. Nature (London) 1975;253(5488):138-41
- Oruc N, Alpman N, Karamanderesi IH. [Hydrogeology of the spring waters with high F content from the surroundings of Tendurek volcano.] Turk Jeol Kurumu Bul 1976;19(1):1-8
- Satake K. [Microbial sulphate reduction in a volcanic acid lake having pH 1.8 to 2.0.] Jpn J Limnol 1977;38(1):33-35
- Stella C, Margaritora FG. Alterations of the plankton in a much polluted lake in central Italy (Latium), the volcanic Lake Nemi algae. Proc Int Assoc Theor Appl Limnol Stuttgart 1978;20(pt. 2):1049-54
- Stoner JC, Whanger PD, Weswig PH. Arsenic levels in Oregon waters. Environ Health Perspect 1977 Aug;19:139-43
- Tsuzuki T, Yasoo I, Kotani R, Katsuhiro I. [Water soluble volcanic ashes and their effects on drinking water.] Suishitsu Odaku ni Kansuru Kenkyu Shuho 1978;10:5-12

GENERAL

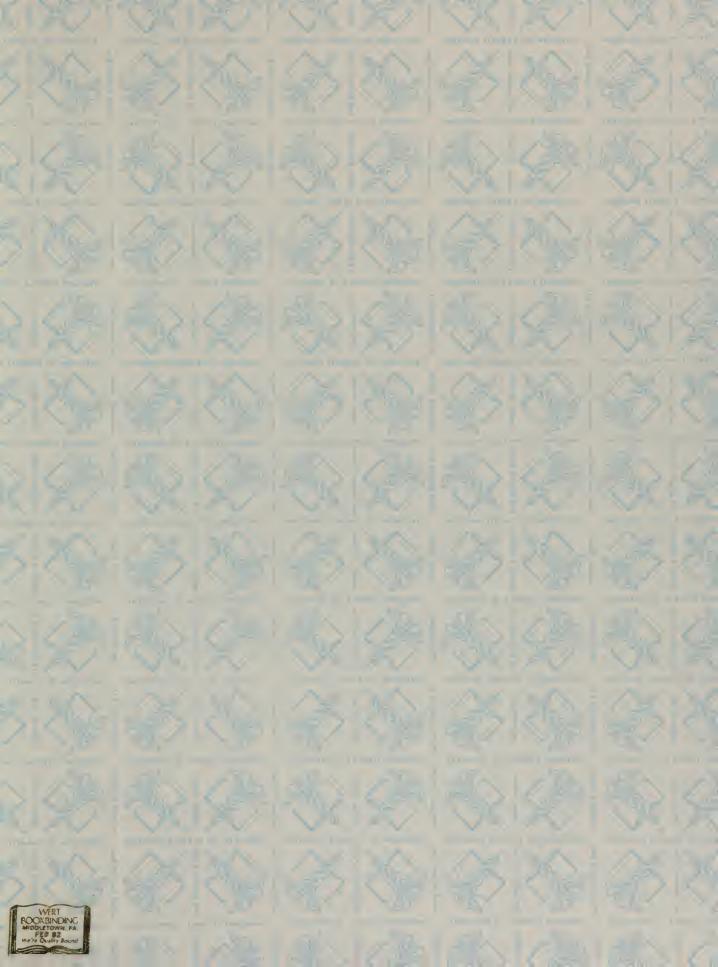
- Barberi R, Gasparini P. Volcanic hazards. Bull Int Assoc Eng Geol 1976; 14:217-32
- Dana JD. Characteristics of volcanoes, with contributions of facts and principles from the Hawaiian Islands, including a historical review of Hawaiian volcanic action for the past 67 years, a discussion of the relations of volcanic islands to deep-sea topography, and a chapter on volcanic-island denudation. New York, 1891
- Disasters: Earthquakes and volcanic eruptions. In: Encyclopedia Americana. International edition. Danbury, Conn, American Corp, 1980. v, 9:161
- Hirshboeck KK. A new worldwide chronology of volcanic eruptions (with a summary of historical ash-producing activity and some implications for climatic trends of the last 100 years). Palaeogeog Palaeoclimat Palaeoecol 1980;29(3-4):223-41
- Latter JH. Natural disaster. Adv Sci 1969;25(126):362-80

- McDonald GA. Volcano. Volcanology. In: Encyclopedia of science and technology: 4th ed. NY, McGraw-Hill, 1977.v.14:403-04;407-09
- National Agricultural Library. Volcanic ash: biological effects, 1968-1979. Beltsville, MD, May 1980. 45 citations from AGRICOLA. (NAL-BIBL.--80-13)
- Ritman A, Ritman L. Volcanoes. London, Orbis Publishing Ltd, 1976. 128 p.
- Sheets PD, Grayson DK. ed. Volcanic activity and human ecology.
 NY, Academic Press, 1979
- Swiss Reinsurance Co. Atlas on seismicity and volcanism. Zurich, 1978
- Williams H. Volcanoes. Sci Am 1951 Nov; 185(5):45-53

-







NATIONAL LIBRARY OF MEDICINE